# Thysanoptera and Aphididae new to the Island of Midway

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(Presented at the meeting of July 8, 1940)

Bryan's list of the insects of Midway (Bishop Museum Bulletin No. 31, 1926) includes only *Aphis medicaginis* Koch among the Aphididae and only one species, unidentified, among the Thysanoptera. The present writer, recently returned from the third of three short successive yearly visits to that island, is now able to add to the fauna of Midway one more species of Aphis with an associated parasite, and four identified species of Thysanoptera. Following is a list of these insects with some pertinent notes. Mr. C. E. Pemberton has kindly identified the Aphididae and *Lysiphlebus;* the writer himself, the Thysanoptera.

**Aphis medicaginis** Koch:—Listed by Bryan in 1926, is still to be found in Midway and was collected by the writer from the flower heads and foliage of isolated and apparently accidentally grown clumps of alfalfa.

**Aphis gossypii** Glover:—Excessively abundant on French marigolds; upon which host the large colonies are parasitized to a considerable extent by the braconid *Lysiphlebus testaceipes* (Cresson).

**Chirothrips mexicanus** Crawford:—Much more abundant in Midway than in the windward islands of our group, this species is probably the "Thrips" listed by Bryan. It was found by the present writer forming large colonies in both *Eragrostis variabilis* Gaud. and *Ammophila arenaria* Link. Mention of the latter, a sand-binding sedge introduced into Midway during the first years of the present century, constitutes a new host record for *Chirothrips mexicanus.*

**Haplothrips gowdeyi** (Franklin):—Found in large numbers in all stages on the flower heads of *Eragrotis variabilis,* but possibly of recent introduction, for it had not been seen by the writer previous to May of this year and could easily have entered Midway with hosts of later arrival than *Eragrostis.*

**Thrips hawaiiensis** (Morgan):—This, the most common thrips of the windward islands, is also found in Midway, but not in abundance. Scattered specimens were collected from flowers of alfalfa and *Leucaena glauca* (Linn.) Bentham.

**Thrips tabaci** Lind.:—This ubiquitous insect is abundant in Midway, causing considerable damage to carnations, stocks, other flowers, and onions.

## Two Thrips New to Hawaii

BY FRED A. BIANCHI
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(Presented at the meeting of December 9, 1940)

The presence in the Territory of *Bregmatothrips venustus* Hood and of *Dendrothripoides ipomeae* Bagnall is here recorded for the first time.

*Bregmatothrips venustus* is a grass feeding species of wide distribution in North America and was first described as a new species and genus in 1912 (Hood. New Genera and Species of North American Thysanoptera from the South and West. Proc. Biol. Soc. Wash.; Vol. XXV, Page 61). Its discovery in Hawaii adds a new species, genus, and sub-family, the Belothripinae, to our thrips fauna, and it should have been recorded earlier, for it was made by the writer at Waipahu, Oahu, on April 29, 1939, and was discussed at the following meeting of the Entomological Society. Through some oversight the proper note failed to reach the printed pages of our "Proceedings" at the time. The thrips is rather common, but by no means abundant, on *Echinochloa crus-galli* at Waipahu.

*Dendrothripoides ipomeae,* of Karny's sub-family Sericothripinae, is here mentioned for the first time as a component of the Hawaiian fauna. As its name indicates, it is a species whose usual hosts appear to be species of *Ipomoea.* Originally described from *I. staphylina* in India (Bagnall. Ann. Mag. Nat. Hist., Ser. 9, Vol. XII, Page 624, 1923), it is also recorded as numerous on *I. batatas* in Brazil (Moulton. The Thysanoptera of South America. Rev. de Entomologia; Vol. III, Fasc. 1, Page 96; March, 1933). In Hawaii, however, *Dendrothripoides* is not yet known from any *Ipomoea* and only a single specimen was found by the writer on *Echinochloa crus-galli* at Kailua, Oahu, on March 13 of the present year.

For the determination of *Bregmatothrips venustus* I am indebted to Professor J. Douglas Hood. I am myself responsible for the identification of the second species.

## Remarkable Longevity of a Pyrophorus Larva

BY FRED A. BIANCHI
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(Presented at the meeting of December 9, 1940)

Though many species of Elateridae are known to have long larval lives and the individuals of most species that have been studied are said to exhibit a wide range of variation in this respect,

it appears of some interest and possible use to record a case of unusual longevity observed by the writer in a larva of *Pyrophorus bellamyi* Van Zwal. This species was discovered by Dr. F. X. Williams and the writer in Guatemala and was by them introduced into Hawaii during 1934-35, so that it stands a chance of becoming established and eventually attaining economic importance among us.

The larva referred to was hatched on the 1st of June, 1934, from an egg laid in our field laboratory in Guatemala and was last seen on November 6 of the present year. It is known, therefore, to have lived 7 years, 5 months, and 6 days before it escaped from the tin pill-box, in which it was reared, and became lost. During the first year and a half of its life it was fed and otherwise treated in exactly the same manner as other larvae hatched from the same batch of eggs, and it gave no indication that its development into the adult form would be abnormally delayed. For this reason no record was made of the number of moults it may have undergone during the first part of its life. Later, beginning with what was probably the eighth moult, a closely approximate record was obtained which showed the occurrence of 13 more moults separated from each other by stadia which, without apparent reason, varied in the following sequence: 52, 111, 20, 111, 227, 76, 245, 108, 161, 79, 172, and 244 days. Beginning with the 6th recorded moult, which occurred when the larva was 2 years, 5 months, and 17 days old and was probably the 14th in its whole life, careful micrometric measurements showed progressive growth of the head capsule up to the 16th ecdysis, no change between the 16th and 17th, and a gradual and small shrinkage from the 17th to the 19th, with the last two exuviae showing no change from the 19th. These measurements are in accordance with the observations of other workers who have noticed body shrinkage in abnormally long lived larvae of other species of Elateridae.

Though it demonstrated the power characteristic of its species somewhat less frequently than other larvae reared under observation, our long lived individual evidently retained the latent ability to produce light throughout its life, for it was last seen strongly luminescent on June 19th of the present year. It illustrated the high biotic potential of *P. bellamyi* by showing no distress whatsoever either when starved for as long as 4 months at a time or when subjected for prolonged periods to the wide range of humidities comprised between the humidity of an ordinary room and that of a tightly closed tin-can partly filled with semi-liquid mud.